

The new claims are directed to an embodiment of the present invention that includes plural reinforcing pads on the mounting surface of the semiconductor device, where each of the reinforcing pads has plural solder balls thereon and the reinforcing pads have a periphery adjacent to the solder balls that, when seen in a plan view of the mounting surface, is at least semicircular. This is disclosed at page 4, lines 18-20, page 9, line 26, and page 10, lines 13-15, and is illustrated, by way of example, in Figure 5A. As seen therein, the periphery of the reinforcing 21, when seen in plan view (e.g., Figure 5A), is at least semicircular adjacent to the solder balls 12. The semicircular periphery of the reinforcing pad avoids the acute portions where mechanical stress can concentrate and promote unwanted peeling of the solder balls from the reinforcing pad. It is to be noted that the reinforcing pad in Figure 5B includes two ends that meet this definition (beneath solder balls 22a and 22b) and a corner that does not.

Claims 1-2 and 7 were rejected as anticipated by WASHIDA 6,144,091. The new claims are believed to avoid this rejection and reconsideration and withdrawal of the rejection are respectfully requested.

WASHIDA does not disclose a reinforcing pad with plural solder balls thereon that has a periphery adjacent to the solder balls that, when seen in a plan view of the mounting surface, is at least semicircular adjacent to the solder balls. The

Official Action points to Figure 4 and the cusp portions that conform to the shape of the solder balls. However, these are not seen in plan view. The plan view is Figure 3 and as seen therein, there are no reinforcing pads that meet this definition.

Accordingly, the new claims avoid the rejection under §102.

Claims 3-6 were rejected as unpatentable over WASHIDA in view of DARVEAUX et al. 6,201,305. DARVEAUX et al. do not make up for the shortcomings of WASHIDA and reconsideration and withdrawal of the rejection are respectfully requested. DARVEAUX et al. disclose a device with one solder ball 24 in the middle of a star-like pattern with arms 32. There is no suggestion to place plural solder balls on a reinforcing pad, where the reinforcing pad has a periphery adjacent to the solder balls that, when seen in a plan view of the mounting surface, is at least semicircular adjacent to the solder balls.

Accordingly, the new claims avoid the rejection under §103.

The new dependent claims add further patentable features. Claim 9 is directed to the embodiment in Figure 5A and claim 10 is directed to the embodiment in Figure 5B, neither of which is disclosed in the applied art. Claim 12 provides that the periphery is no more semicircular adjacent to the solder balls, such as shown in Figure 5A and at 22a and 22b in Figure 5B.

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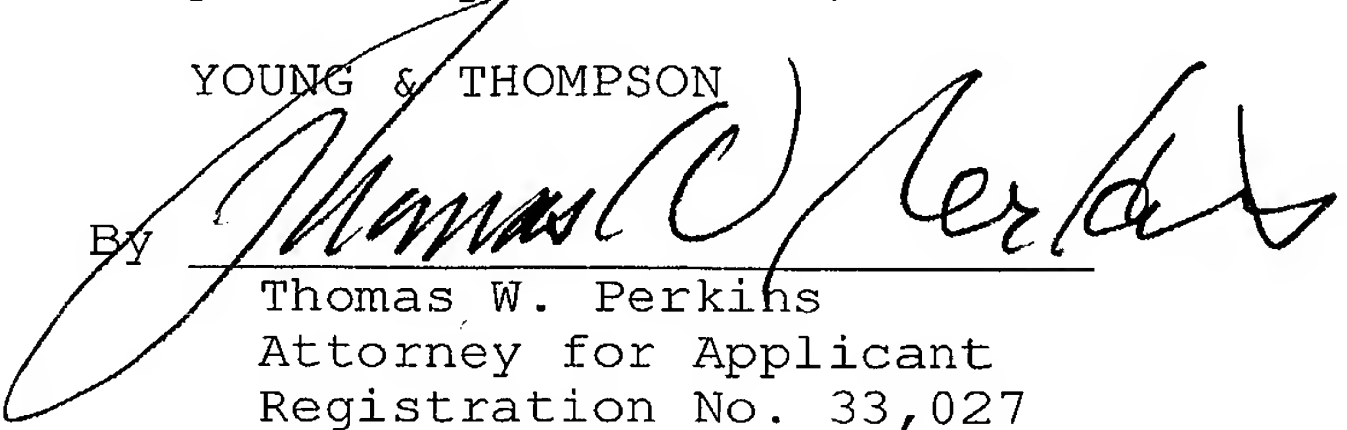
In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

Attached hereto is a marked-up version of the changes made to the abstract and specification. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

Respectfully submitted,

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